REMARKS

Claims 1-28 have been cancelled in favor of newly presented claims 29-63.

Applicant respectfully notes the Examiner's acknowledgment of the claim for priority as well as the receipt of the priority applications. Applicant also notes the Examiner's consideration of the prior art cited in the Information Disclosure Statement of July 6, 2000.

The Examiner concludes that the claims of the present application are not directed to a "special technical feature" since the Examiner concludes that these claims are not patentable. It is respectfully submitted that this conclusion must necessarily also suggest that if the claims are patentable, they are directed to a single technical feature. Consequently, the Examiner is respectfully requested to reconsider and withdraw the election of species. Note that new claims 29-63 contain an independent genus claim 29 which is believed a genus claim to the invention recited in the species of the present application.

With regard to the Examiner's objection pertaining to substantial duplication, Applicant has a right to present his invention in a single application with claims that may include minor differentiation. That being said, the attached claims are believed to remedy many of the concerns raised by the Examiner and should overcome the Examiner's concerns in this regard.

Applicant respectfully traverses the Examiner's objection to the term "biting." It is respectfully submitted that one of ordinary skill in the art would recognize this term refers to the lock up or seizure between the valve body and valve spool. It is respectfully submitted that the meaning of this term is clear from the specification

and is not inconsistent with the ordinary meaning of this term in the art. The Examiner is accordingly requested to reconsider and withdraw this basis to the Examiner's objection. With regard to the Examiner's concerns pertaining to page 10, line 3 of the specification, it is respectfully submitted that this has been overcome by the attached Response.

With regard to the Examiner's § 112, second paragraph rejection, the individual bases for the Examiner's rejection have been considered in presenting the attached claims. However, it is respectfully submitted that substantially all of the Examiner's § 112, second paragraph rejection confuses breadth with indefiniteness. The Examiner's concerns do not render the claims indefinite, as they are defined with reference to the disclosure of the present application, with sufficient specificity to enable one of ordinary skill in the art to understand the scope of the claims. Accordingly, it is respectfully submitted that the replacement of the original claims with the attached claim set is not to overcome this statutory rejection. Instead, the primary purpose of replacing the claim set is to provide genus claims to enable the Examiner to examine all claims together in the present application.

Prior to dealing with the Examiner's outstanding prior art rejections, Applicant would first like to briefly explain the preferred embodiments of the invention to the Examiner. The present application describes four embodiments of a hydraulic control valve and power steering apparatus. A valve body 1, valve spool 2, and oil groove rings 4, 5, cooperate in accordance with the teachings of the present application. The valve spool 2 may fit into the valve body 1 and is interconnected by a torsion bar 3. The valve spool may be displaced within a range twist of the torsion bar 3.

Pressurized oil from a hydraulic pump is introduced into oil chambers, which are fed either into a tank or to a cylinder chamber. In the first embodiment, alternating pairs of chamfers are provided on consecutive valve spool posts (recited in new claim 30). The second embodiment provides alternating pairs of chamfers on the same valve spool post (this is recited in new claim 31), and a third embodiment, alternating pairs of chamfers are provided on the same valve body post (this is recited in new claim 32). Finally, the fourth embodiment utilizes alternating pairs of chamfers on consecutive valve body posts and is described with respect to new claim 33.

The Examiner has rejected the claims as being allegedly anticipated by prior art Figures 1 and 2 of the present application. This rejection is respectfully traversed for the following reasons.

It is apparent that Figures 1 and 2 of the present application fails to teach that the valve spool includes alternate pairs of chamfers, but rather teaches chamfering both corner portions of all the valve spool posts. For example, both Figures 1 and 2 of the present specification show that every corner of the valve spool posts are chamfered at 6a and 6b. As compared to these figures, in the present invention, selected corners are chamfered as shown, for example, in Figures 6-12 of the present application. Accordingly, the Examiner's rejection cannot suggest the invention recited in any of the pending claims and the Examiner is respectfully requested to reconsider and withdraw this rejection.

The Examiner further rejects claims 1-4, alleging that these claims are anticipated by the Yuuichi Japanese patent publication. The Yuuichi Japanese patent publication is deficient, however, does not disclose a device wherein only one of the

valve body or the valve spool includes alternate pairs of chamfers. Consequently, Yuuichi cannot anticipate the invention recited in new independent claim 29.

The Examiner goes on to reject claims 1-28 as being unpatentable over the Kanazawa Japanese patent publication in view of the Yuuichi publication. This rejection is traversed for the following reasons.

The Examiner's rejection combination relying on Kanazawa and Yuuichi relies on Yuuichi to teach the camfering characteristics of the valve spool. Since Yuuichi is deficient for the reasons set forth above, the Kanazawa reference cannot correct this deficiency. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Attached hereto, please find a drawing correction labeling Figs. 1-4 as "Prior Art." These figures are directed to the structure of the reference cited in the Background Art at page 2, lines 20-25. However, Applicant respectfully requests reconsideration of the requirement to label Figs. 5 and 6 as prior art. There is no evidence that these characteristics were known prior to Applicant's investigation and thus, since they are not directed to a prior art device, the requested label is believed inappropriate. Should the Examiner persist in making this requirement, the Examiner is respectfully requested to explain his reasoning.

Should there by any further issues outstanding with respect to the present application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Northern Virginia area to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448

for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By: _____
Michael K. Mutter
Reg. No. 29,680

MKM/gf
(703) 205-8000
1560-0345P

P.O. Box 747
Falls Church, VA 22040-0747

Marked-Up Copy of the Specification

Page 10, first paragraph, please replace the paragraph to read as follows:

The present application is directed to [applicant is developing] a power steering apparatus in which the conventional hydraulic control valve of the above-described structure is used, a hydraulic pump is standby controlled (low-speed rotation or zero-speed rotation), and when a steering torque is not applied to a steering wheel at the time of idling or the like, the small or zero flow rate of pressurized oil about 1 to 2 liter/min is introduced into the oil supply chamber of the hydraulic control valve, the steering angle of the steering wheel is detected, and the flow rate of oil of the hydraulic pump can be increased in accordance with the steering angular velocity based on the detected steering angle. According to such a power steering apparatus, it is possible to abruptly change the flow rate to be controlled of the hydraulic control valve from the small flow rate as small as possible or zero flow rate to high flow rate as compared with the conventional small flow rate.